

## **Amendment**

### **Amendments to the Claims**

Please amend claim 3, without prejudice.

Please cancel claims 15-41, without prejudice.

Please add new claims 42-69.

This listing of claims will replace all prior versions, and listings of claims in the application:

### **Listing of Claims:**

1.     **(Original)** A method comprising:
  - a. determining an initial efficient portfolio of financial products selected by an optimization process from an available set of financial products;
  - b. determining an alternate portfolio that is more diverse than the initial efficient portfolio by searching one or more dimensions of an error space proximate to or surrounding the initial efficient portfolio for a more diverse portfolio of financial products from the available set of financial products;
  - c. calculating a cost associated with the alternate portfolio by determining the difference between a characteristic of the initial efficient portfolio and a corresponding characteristic of the alternate portfolio; and
  - d. selecting the alternate portfolio if the cost is less than or equal to a predetermined diversity budget.
2.     **(Original)** The method of claim 1, further comprising repeating b-d if no stopping conditions are met, wherein said selecting the alternate portfolio also considers the relative desirability between the alternate portfolio and the selected alternative portfolio from a previous iteration.
3.     **(Currently Amended)** The method of claim [[1]]2, wherein the stopping conditions comprise one or more of the following:

the cost exceeds the predetermined diversity budget;  
holding a measure of risk constant is no longer feasible;  
a maximum exposure is less than a predetermined minimum exposure threshold;  
exposure to a predetermined maximum number of mutual fund products has been achieved;  
exposure to a predetermined minimum number of mutual fund products has been achieved;  
a predetermined maximum number of iterations has been performed;  
a predetermined minimum number of iterations has been performed;  
a predetermined maximum number of alternate portfolios has been considered; and  
a predetermined minimum number of alternate portfolios has been considered.

4. **(Original)** The method of claim 3, wherein the predetermined diversity budget is a default parameter.
5. **(Original)** The method of claim 3, wherein the predetermined diversity budget is a user-specified parameter.
6. **(Original)** The method of claim 1, wherein the determining an alternate portfolio further comprises imposing a maximum exposure constraint that limits holdings in any individual financial product of the available set of financial products.
7. **(Original)** The method of claim 1, wherein the predetermined diversity budget is based at least in part upon a user-specified utility function.
8. **(Original)** The method of claim 1, wherein the predetermined diversity budget is based at least in part upon a level of investment risk specified by the user.

9.     **(Original)** The method of claim 1, wherein the characteristic comprises expected return.
10.    **(Original)** The method of claim 1, wherein the characteristic comprises risk.
11.    **(Original)** The method of claim 1, wherein the error space is defined in terms of one or more of expected return, risk, and utility.
12.    **(Original)** The method of claim 1, wherein searching the one or more dimensions of an error space comprises evaluating portfolios having substantially the same level of risk as the initial portfolio but having lower expected returns.
13.    **(Original)** The method of claim 1, wherein searching one or more dimensions of an error space comprises evaluating portfolios having approximately the same expected returns as the initial portfolio but having a higher level of risk.
14.    **(Original)** The method of claim 1, wherein searching one or more dimensions of an error space comprises evaluating portfolios with higher diversity levels, but with utility levels which do not fall below a predetermined utility floor defined by a utility budget.
- 15-41. **(Cancelled)**
42.    **(New)** A method comprising:
  - a. a step for determining an initial efficient portfolio of financial products selected by an optimization process from an available set of financial products;
  - b. a step for determining an alternate portfolio that is more diverse than the initial efficient portfolio by searching one or more dimensions of an error space proximate to or surrounding the initial efficient portfolio for a more diverse portfolio of financial products from the available set of financial products;

- c. a step for calculating a cost associated with the alternate portfolio by determining the difference between a characteristic of the initial efficient portfolio and a corresponding characteristic of the alternate portfolio; and
  - d. a step for selecting the alternate portfolio if the cost is less than or equal to a predetermined diversity budget.
43. **(New)** The method of claim 42, further comprising repeating b-d if no stopping conditions are met, wherein said step for selecting the alternate portfolio comprises a step for considering relative desirability between the alternate portfolio and the selected alternative portfolio from a previous iteration.
44. **(New)** The method of claim 43, wherein the stopping conditions comprise one or more of the following:
- the cost exceeds the predetermined diversity budget;
  - holding a measure of risk constant is no longer feasible;
  - a maximum exposure is less than a predetermined minimum exposure threshold;
  - exposure to a predetermined maximum number of mutual fund products has been achieved;
  - exposure to a predetermined minimum number of mutual fund products has been achieved;
  - a predetermined maximum number of iterations has been performed;
  - a predetermined minimum number of iterations has been performed;
  - a predetermined maximum number of alternate portfolios has been considered; and
  - a predetermined minimum number of alternate portfolios has been considered.
45. **(New)** The method of claim 44, wherein the predetermined diversity budget comprises a default parameter.

46.     **(New)** The method of claim 44, wherein the predetermined diversity budget comprises a user-specified parameter.
47.     **(New)** The method of claim 42, wherein the step for determining an alternate portfolio further comprises a step for imposing a maximum exposure constraint that limits holdings in any individual financial product of the available set of financial products.
48.     **(New)** The method of claim 42, wherein the predetermined diversity budget is based at least in part upon a user-specified utility function.
49.     **(New)** The method of claim 42, wherein the predetermined diversity budget is based at least in part upon a level of investment risk specified by the user.
50.     **(New)** The method of claim 42, wherein the characteristic comprises expected return.
51.     **(New)** The method of claim 42, wherein the characteristic comprises risk.
52.     **(New)** The method of claim 42, wherein the error space is defined in terms of one or more of expected return, risk, and utility.
53.     **(New)** The method of claim 42, wherein the step for searching the one or more dimensions of an error space comprises a step for evaluating portfolios having substantially the same level of risk as the initial portfolio but having lower expected returns.
54.     **(New)** The method of claim 42, wherein the step for searching one or more dimensions of an error space comprises a step for evaluating portfolios having approximately the same expected returns as the initial portfolio but having a higher level of risk.
55.     **(New)** The method of claim 42, wherein the step for searching one or more dimensions of an error space comprises a step for evaluating portfolios with

- higher diversity levels, but with utility levels which do not fall below a predetermined utility floor defined by a utility budget.
56. **(New)** A computer-readable medium having stored thereon instructions, which when executed by one or more processors cause a method to be performed comprising:
- a. determining an initial efficient portfolio of financial products selected by an optimization process from an available set of financial products;
  - b. determining an alternate portfolio that is more diverse than the initial efficient portfolio by searching one or more dimensions of an error space proximate to or surrounding the initial efficient portfolio for a more diverse portfolio of financial products from the available set of financial products;
  - c. calculating a cost associated with the alternate portfolio by determining the difference between a characteristic of the initial efficient portfolio and a corresponding characteristic of the alternate portfolio; and
  - d. selecting the alternate portfolio if the cost is less than or equal to a predetermined diversity budget.
57. **(New)** The computer-readable medium of claim 56, wherein the method further comprising repeating b-d if no stopping conditions are met, wherein said selecting the alternate portfolio also considers the relative desirability between the alternate portfolio and the selected alternative portfolio from a previous iteration.
58. **(New)** The computer-readable medium of claim 57, wherein the stopping conditions comprise one or more of the following:
- the cost exceeds the predetermined diversity budget;
  - holding a measure of risk constant is no longer feasible;
  - a maximum exposure is less than a predetermined minimum exposure threshold;
  - exposure to a predetermined maximum number of mutual fund products has been achieved;

- exposure to a predetermined minimum number of mutual fund products has been achieved;
- a predetermined maximum number of iterations has been performed;
- a predetermined minimum number of iterations has been performed;
- a predetermined maximum number of alternate portfolios has been considered; and
- a predetermined minimum number of alternate portfolios has been considered.
59. **(New)** The computer-readable medium of claim 58, wherein the predetermined diversity budget comprises a default parameter.
60. **(New)** The computer-readable medium of claim 56, wherein the predetermined diversity budget comprises a user-specified parameter.
61. **(New)** The computer-readable medium of claim 56, wherein the determining an alternate portfolio further comprises imposing a maximum exposure constraint that limits holdings in any individual financial product of the available set of financial products.
62. **(New)** The computer-readable medium of claim 56, wherein the predetermined diversity budget is based at least in part upon a user-specified utility function.
63. **(New)** The computer-readable medium of claim 56, wherein the predetermined diversity budget is based at least in part upon a level of investment risk specified by the user.
64. **(New)** The computer-readable medium of claim 56, wherein the characteristic comprises expected return.
65. **(New)** The computer-readable medium of claim 56, wherein the characteristic comprises risk.

66.    **(New)** The computer-readable medium of claim 56, wherein the error space is defined in terms of one or more of expected return, risk, and utility.
67.    **(New)** The computer-readable medium of claim 56, wherein searching the one or more dimensions of an error space comprises evaluating portfolios having substantially the same level of risk as the initial portfolio but having lower expected returns.
68.    **(New)** The computer-readable medium of claim 56, wherein said searching one or more dimensions of an error space comprises evaluating portfolios having approximately the same expected returns as the initial portfolio but having a higher level of risk.
69.    **(New)** The computer-readable medium of claim 56, wherein said searching one or more dimensions of an error space comprises evaluating portfolios with higher diversity levels, but with utility levels which do not fall below a predetermined utility floor defined by a utility budget.